

Application No. 10/587,741
Paper Dated: January 13, 2012
In Reply to USPTO Correspondence of October 13, 2011
Attorney Docket No. 5503-061852

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims

Claims 1-26 have been cancelled.

27. (Currently Amended) A method for operating a refrigeration plant, which comprises in a refrigeration circuit a compressor (5), a condenser, an injection expansion valve (6) with an entrance and an exit, and an evaporator (1), the evaporator being passed through on its secondary side by a secondary medium to be cooled down, whereby a heat exchanger (4) is provided between a feed line for the secondary medium and a refrigerant line leading to the entrance of said injection expansion valve (6), such that said heat exchanger is positioned directly upstream of the entrance of said injection expansion valve, and whereby the method is comprised of the step of keeping constant the temperature (A) of the refrigerant at the entrance of the injection expansion valve (6), thereby achieving a stable operation of and hence a highly efficient evaporation in the refrigeration circuit.

28. (Previously Presented) The method according to claim 27, further including the step of at least partially passing a mass flow of the cooled-down secondary medium through the heat exchanger (4) in parallel or counter-flow or cross-flow with respect to the refrigerant flow by means of a first valve (11).

29. (Currently Amended) [[A]] The method according to claim 27, further including the step of passing the refrigerant leaving said evaporator (1) through an internal heat exchanger (2), which may operate as a second evaporating means.

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30. (Currently Amended) [[A]] The method according to claim 29, whereby, by means of a second valve (9) provided between said refrigerant line leading to said injection expansion valve (6) and said internal heat exchanger (2), further including the step of passing a predetermined part of the refrigerant mass flow through said internal heat exchanger (2), while the remaining mass flow is directly conducted to said injection expansion valve (6), to additionally keep the temperature (A) of the refrigerant at the entrance of the injection expansion valve (6) constant.

31. (Currently Amended) A refrigeration plant for conducting the method according to one of the claims 27-30, whereby said refrigeration plant comprises in a refrigeration circuit a compressor (5), a condenser, an injection expansion valve (6) with an entrance and an exit and an evaporator (1), wherein the evaporator being passed through on its secondary side by a secondary medium to be cooled down, whereby a heat exchanger (4) is provided between a feed line for the secondary medium and a refrigerant line leading to the entrance of said injection expansion valve (6), wherein the heat exchanger is passed through by said refrigerant on the primary side of the heat exchanger, and by said cooled-down secondary medium on the secondary side of the heat exchanger.

32. (Currently Amended) The refrigeration Refrigeration plant according to claim 31, whereby a first valve (11) is arranged at the secondary side of said heat exchanger (4), such that a mass flow of said cooled-down secondary medium is at least partly passed through said heat exchanger in parallel or counter-flow or cross-flow with respect to the refrigerant flow.

33. (Currently Amended) The refrigeration Refrigeration plant according to claim 31, whereby the refrigerant leaving said evaporator (1) is passed through an internal heat exchanger (2), and whereby a second valve (9) is provided between said refrigerant line leading to said injection expansion valve (6) and said internal heat exchanger (2), such that a predetermined part of the refrigerant mass flow is passed through said internal heat exchanger (2), while the remaining mass flow is directly conducted to said injection expansion valve (6).